

**James Burtie**

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**From:** Jrpmccoy@aol.com  
**Sent:** Friday, June 18, 2004 11:15 AM  
**To:** James Burtie  
**Subject:** Follow-up to BPL complaints in Penn Yan NY

Mr. Burtie,

I am providing you this overview in support of our telephone call on Wednesday. Again, DVI is the BPL company that has been deploying a broadband network in Penn Yan, NY. We are utilizing the Amperion equipment and have tuned it to avoid the local HAM operator frequencies as well as the emergency frequencies in use within the village. We have not been approached by any other members with complaints but have been collecting their comments which circulate within their organization. On the 20th of April we were invited to the local chapter's meeting. That morning we had returned the network passed on Amperion's tuning at Progress energy to avoid all frequencies in use by the HAMS not just the local.

Note that there is a spot in Penn Yan where we can not maintain PLC on the lines due to the SNR and were not able to find the source other than the P&C grocery store. The police have always had a problem there as well. The problem is intermittent. This is the spot that Mr. Halliday chose after the meeting to listen to BPL noise. He did not find it and then accused us of turning off the network! I will forward the availability reports to you showing no such "outage" event occurred. They simply were trying to read the intermittent noise that was not there at that time. Also note that on the frequency map we have wireless hops in that area. PLC is not operational there.

Below are a few of the many e-mails that have transpired,

Hi Ed,

Long time since we last communicated, as you are aware we have a trial up and running in Penn Yan, NY. I am aware that there have been several HAMS that have visited the site with mixed concerns. In addition, the Mayor has received a letter from Mr. Sumner who has requested to do some testing in PY provided that the BPL provider will accommodate. As I have stated in previous emails, DVI is willing to work with the ARRL to find a common ground and dispel any issues and concerns.

Lets talk about how we can setup a meeting in Penn Yan where you can bring your professionals and DVI can bring ours to collaborate together in a testing effort as apposed to us both waiving our sabers at each other. Lets work together....I am very open to discussion regarding any and all issues regarding BPL and any related interference..

Please call me at my number below to get the ball rolling..

Regards,

Marc J. Burling

Chairman & CEO  
 Data Ventures Inc. (DVI)  
 Ph: 315-868-9444  
[www.godvi.com](http://www.godvi.com)

-----Original Message-----

From: Hare,Ed, W1RFI [mailto:w1rfi@arrl.org]  
 Sent: Thursday, November 20, 2003 3:20 PM

10/21/2004

To: info@godvi.com  
Cc: Steve Greene (E-mail)  
Subject: Amateur Radio and BPL

Hello,

Please forward this to Mr Burling and Mr McCoy.

I am sure pretty aware of ARRL and our role in Amateur Radio. I understand that DVI is involved in the upcoming BPL trial in Penn Yan, NY. I am pleased to hear that you are working with the local amateur community. If I can be of any help interfacing at the national level, I can serve as a technical point of contact or I can help you interface with other parts of ARRL.

For starters, you may want to review ARRL's BPL information at <http://www.arrl.org/bpl>. None of the trial areas in the video are Amperion, but they use the DS-2 chipset as seen the Ambient system documented in trial area #4.

73,  
Ed Hare, W1RFI  
ARRL Lab  
225 Main St  
Newington, CT 06111  
Tel: 860-594-0318  
Internet: w1rfi@arrl.org  
Web: <http://www.arrl.org/tis>

Joe,

I sent this to Jon and talked to Dave, can we be there...

— Original Message —

**From:** The Kingsleys

**To:** [info@godvi.com](mailto:info@godvi.com)

**Sent:** Sunday, April 18, 2004 4:30 PM

**Subject:** BPL in Penn Yan

My name is Rick Kingsley and as president of the Yates Amateur Radio Club, and A.R.E.S. coordinator for the county, I most cordially invite one of your representatives to attend our next monthly meeting. I realize that this is extremely short notice, but I feel your presence there might help to clear up and / or better explain some of the issues and concerns with BPL as it applies to the Amateur Radio Service. Please be our guest(s), at our April 2004 meeting, to be held on Tuesday, April 20, 2004. The club meets in the basement of St. Michael's Church, which is located on Liberty St....directly across from the P&C Market. Feel free to contact me, for more detailed directions if needed.

I will look forward to your attendance!

Respectfully: R. A. Kingsley

Hi Rick,

I happened to notice the response that was posted by Dave Halliday, for the record, Dave Simmons is not being compensated by DVI, and also the network was not shut down by Mr. Loe. It was up and functioning. As I mentioned we have introduced new software that allows us to notch out HAM frequencies, it appears that it is working as documented by Mr Hallidy in this statement:

"We went outside and those that were left wanted to see my mobile setup and hear the interference. Guess what? IT

10/21/2004

VAS GONE!!! THE SYSTEM HAD BEEN SHUT DOWN, either in the time before Simmons and Loew got to the meeting (maybe why they were late), or when Loew slipped out the door at the end. Everything was gone, completely"

m sure that you are aware that this completely contradicts previous statements which could give your chapter and the league a ery big black eye.

t is not my intention as would be by other BPL companies to take this information and use it to drag you through the mud. Lets alk to determine if in fact we have been able to deploy the first BPL network that is interference free.

----- Original Message -----

**From:** The Kingsleys

**To:** Marc J. Burling

**Sent:** Tuesday, April 20, 2004 10:35 PM

**Subject:** Re: BPL in Penn Yan

Hello Marc, thanks for sending Jon down this evening. We had a big turnout, and very interesting meeting. Jon was in the "cat-bird seat" as its sometimes called, but did very well and hopefully we sent him on his way without too many wrinkles! As it stands, there are still many unanswered questions, and further testing will help us unravel remaining concerns. There is more at stake here, besides the Amateur Radio Service, and these issues still need more clarification...better addressed by perhaps someone from Amperion's technical staff. One thing was clear, however, in that everyone present tonight felt it imperative to meet again, with representatives with the expertise necessary to field questions of a more technical nature. You and I will be talking again, I'm sure, and I will again reiterate my thanks to you for providing representation on such short notice!

Sincerely: R. A. Kingsley

----- Original Message -----

**From:** Marc J. Burling

**To:** The Kingsleys

**Sent:** Tuesday, April 20, 2004 10:21 AM

**Subject:** Re: BPL in Penn Yan

Hey Rick,

I will have Jon Loe at the meeting, I tried your work number with no success, said the number was invalid so I left a me VM at your home. We have notched out the HAM bands as of 4-19-04, lets see how things work now.

I want to work with everyone to make this thing work if it is technically possible....

----- Original Message -----

**From:** The Kingsleys

**To:** Marc J. Burling

**Sent:** Monday, April 19, 2004 5:27 PM

**Subject:** Re: BPL in Penn Yan

Hell again! Sorry you won't be able to attend, but I will let all know what transpired. Phone numbers for me are as follows: Home: 315-536-5092 Work (Rochester Radio) 585-435-7944 Give me a ring any time! And, thanks for the support! I knew I would be opening pandora's box here...but what the hell, someone's got to stand up for Penn Yan, right? 73

----- Original Message -----

**From:** Marc J. Burling

**To:** The Kingsleys

**Sent:** Monday, April 19, 2004 10:43 AM

**Subject:** Re: BPL in Penn Yan

Hi Rick,

Thank you for the invitation, I wish I new a little earlier as I would personally attend. Let me see if I can get some representation there.

Please supply me with a phone number where I can reach you...

||| | — Original Message —

- In BPLandHamRadio@yahoogroups.com, "Dave Hallidy" <k2dh@f...>  
rote:

strongly support this move- our small radio club (the Rochester VHF  
group)  
onated, at it's April meeting, well over \$1000 to the ARRL Spectrum  
defense  
und. We voted to make a donation from the club treasury, and it was  
icely  
upplemented by members reaching into their own pockets to increase  
ie size  
nd meaning of the donation. The WNY Section Manager and Assistant  
ection  
anager came to the meeting to accept the donation, and we have  
ceived a  
ery nice note of appreciation from HQ- they know it's not easy. If  
ou're  
member of a club, suggest such a donation at your next meeting (and  
ie  
mount isn't as important as the gesture, by the way)- I think all of  
ou on  
is reflector know the reasons it's important and can explain them  
the  
members of your clubs who aren't so well-informed.

his fight will probably end up in the courts, and it will take \$\$\$  
make  
go. The line is in the sand, folks. The ARRL has done an  
utstanding  
b of pointing out the realities of BPL, and the FCC's dereliction  
f it's  
uties, and if we're to be left with our spectrum intact, we need to  
upport  
eir efforts- we can't do it ourselves. I've read all the comments  
the  
IPRM (lots of time on my hands, unfortunately), and there are some  
ally  
ood ones, but the League's makes so many points, and so well, that  
is  
ist amazing. The League needs our full support, or we will have no  
om to  
ripe if the outcome doesn't go our way.

o Dave Sumner, Chris Imlay, Ed Hare, and all the other staff at the  
eague-  
ongratulations! Nice job and you have my full support!

ave Hallidy K2DH

—Original Message—

rom: n4jzo [mailto:n4jzo@y...]  
ent: Tuesday, May 04, 2004 2:54 AM  
o: BPLandHamRadio@yahoogroups.com  
ubject: [BPLandHamRadio] Re: ARRL comments filed

es Kris, the ARRL did an Outstanding Job.  
will be looking deep into my pockets to find something extra to  
end them.

10/21/2004

Ed, Chris, Thanks so very much for your hard work.

Keep going.

==>I believe the FCC CANNOT ignore your submittal.

I enjoyed every word. Finally someone with the nerve to insist they do their job!! Excellent!!

Every ham should join the ARRL and help them fight this ridiculous but HUGE threat.

Thanks ARRL!!!

Fletch

N4JZO

— End forwarded message —

— In BPLandHamRadio@yahoogroups.com, "Dave Hallidy" <k2dh@f...> wrote:

RIGHT ON! The fight HAS only begun. I have never been called a quitter, and I won't be now. I won't stop fighting this thing, and I'll only stop hamming when they pull the key from my cold, dead fingers. Ham radio got me a wonderful hobby (Obsession, really) for the past ~40 years, and it got me the basis for a wonderful career in RF/Microwave Systems Engineering. The roots are too deep- this tree will never fall!  
Dave Hallidy K2DH

—Original Message—

From: W5WRL [mailto:wlawless@w...]

Sent: Sunday, May 02, 2004 10:12 AM

To: BPLandHamRadio@yahoogroups.com

Subject: RE: [BPLandHamRadio] Steve Waldee's "take" on BPL

The give up and die is one camp that I will not join. Steve and most of the other hams I know can.

I see this fight as far from over. This is a severely flawed technology that is being touted by a bunch of non technical politicians as the deliverer of broadband to the masses. They are wrong and it will become evident in due time.

Give up? Are you kidding? The fight is just getting interesting.

Bill - W5WRL

— End forwarded message —

Welcome to the front line of the battle between BPL and ARRL. We have lost a \$2 million investor due to this. It is a problem.

Joesph R. McCoy, PE

10/21/2004

resident  
IVI  
www.godvi.com

DaveHallidyK2DHReportfromPenYann

To: <BPLandHamRadio@yahoogroups.com>  
From: "Dave Hallidy" <k2dh@frontiernet.net>  
Mailing-List: list BPLandHamRadio@yahoogroups.com; contact  
BPLandHamRadio-owner@yahoogroups.com  
Date: Tue, 30 Mar 2004 11:28:16 -0500  
Subject: [BPLandHamRadio] Report Of Visit To Penn Yan, NY BPL Test Site

All- As you no doubt are aware, there is a BPL test site operational in Penn Yan, NY. This was reported recently in the Wall Street Journal, with a local ham in Penn Yan being "satisfied there is no interference".

On Saturday March 27, 2004 I drove from Rochester, NY (my home) down to Penn Yan (about an hour's drive) to listen for myself, to confirm or disprove the report.

The system in Penn Yan is an Amperion system and a visit to their website shows them proudly quoting Mr. David Simmons, the individual reporting "no interference in Penn Yan". The poletop devices are Amperion "Griffin 1000" units. Amperion uses 2.4GHz to bring the BPL to the subscribers, after taking it off the MV lines.

My equipment for this test was my mobile ham setup, which consists of a Yaesu FT-100D and a Tarheel MT300A Screwdriver Antenna with automatic control for tuning on any frequency between 2.5 and 30MHz (I also have an Ameritron ALS500M 500W mobile HF amp in the truck for transmitting, but this was a receiving test, so I didn't turn it on). Following is my report of the experiences and observations during the trip:

"I just returned from my trip to Penn Yan to search for the BPL system there, and give it a listen. Following are the findings and some possible conclusions as to why there have been no complaints about this system:

- 1) I (K2DH) visited Penn Yan with my wife Diane, WB2QCJ (Dean Keyser), and we were joined later by N2JC (Jim Collinsworth)- today March 27, 2004 between approximately 10AM and Noon.
- 2) The system is installed on Liberty Street between Keuka and Court (something like 9 blocks).
- 3) They tap the BPL signal off one of the top wires on the poles running down the East side of Liberty, and feed the signal to a box at the pole top which contains the 2.4GHz equipment and a small vertical antenna. I've attached a picture of a poletop so you can see what's going on.
- 4) Not all poles in the test area have taps/2.4GHz boxes on them. In one area, two adjacent poles did, otherwise, it was more spread out (every three or four poles, as I recall).
- 5) Dean and I discovered interference- PLENTY OF IT. I think it's significant that we both HEARD the interference BEFORE WE FOUND THE EQUIPMENT- we didn't even know for sure where the test area was (being unfamiliar with the streets in the town). But, parked at the local grocery store, we found the signals very quickly and then discovered that they were right above our heads!
- 6) The BPL noise appears to start in earnest around the bottom of the 17m band (18MHz) and continues upwards. Most of what is heard is a series of closely spaced tones (maybe 1kHz apart), with modulation which sounds like a "tick-tick", or a buzz, or a combination of the two. Once we started tuning above 18MHz, there were no frequencies where these sounds were not observed in one form or the other. The highest frequency on which I detected any signal was around 38MHz. The signals were pretty uniform from 18->30MHz. Above there they began dropping out and only short pulses could be heard from 35-38MHz, along with an occasional stronger tone-like birdie. I also found fairly discrete signals at 3821kHz- very strong, and at 14317kHz- very strong (some noise was modulating these signals at a low level, but

DaveHallidyK2DHRReportfromPenYann

in general, the 80 and 20m bands were otherwise quiet). I could detect no BPL signals on 40m. I did not listen to the 60m band (I forgot). Note: by "very strong" I'm talking about S9 or greater, with an S0 reference. The signals from 18-30MHz also were at or above S9, and my attempts to take them down to the noise floor of the receivers were generally unsuccessful. I turned OFF the internal preamp of the FT-100 and turned ON the internal 12dB attenuator, and could not eliminate the signal (I think this corresponds to a little over 30dB of total attenuation). It appeared, from the remaining level of signal after these attempts, that the signals were at least 40dB above the noise floor at most frequencies (actually, Dean did better than I

with this, putting in 50dB of pad at one point and being unable to completely lose the signal- this corresponds with the S9 levels we saw, which equates to 54dB above the noise at 6dB/S-unit).

7) The highest level of noise is, as one would guess, when located closest to the overhead lines carrying the signal. Within 1/4 to 1/2 mile of the lines, interference is strong, ranging from S5 to S9. But, in one test, I went up Liberty past the test area to see how far Northward the signal could be detected, and I was 1.5 miles North of the northern boundary and it was still S2-S5 at 24.5MHz. I then proceeded Eastward to see how far from the test area in that direction it could be heard and it was a shorter distance- about 3/4 mile. This was due, I think, to the fact that the test area is on the west side of the center of town and the signal had to propagate through all the buildings of town (I did not attempt to travel westward from the lines, as this area appeared to be wooded and difficult to pass through). That said, I was able to detect the signal at 14317kHz for over FIVE MILES from the test area, as we left town to come home!

8) For those who may doubt my story, I tape recorded as much of it as I could, and it can be listened to at anytime- there's a narration along with it to document the time, frequency, and location of each sample recorded. I'll try to generate a .wav file of parts of it, and if successful, I'll distribute it.

9) As far as my notes with regard to where I finally lost the ability to detect signals above 38MHz, I have to mention that from 30-38MHz, my mobile antenna cannot be resonated, so the apparent decrease in signal strength may not be correct- a resonant antenna may provide quite different results.

10) My equipment- A Yaesu FT-100D as the receiver, a Tarheel MT300A Screwdriver on the rear bumper of the truck as the antenna- this antenna is microprocessor-controlled to autotune to the frequency of the radio, using an AMAC SC1C controller and in all cases below 30MHz, was tuned to <1.5:1 VSWR (I turned OFF the antenna controller when listening on a frequency so as not to detect any possible signals from that unit- there are a few). I varied the detection scheme between AM, SSB and FM numerous times to see what differences I could make in the receiver's ability to detect the BPL signal. There is actually FM modulation on the signal to the point that in FM mode, I could still easily recover plenty of audio. I could not turn off the receiver AGC- that option is not available in the FT-100D. I DID try running with and without the Noise Blanker, and could see no difference- the blanker could not set up on the noise to reduce it's level. WB2QCJ's equipment- A radio from RF Communications Div of Harris Corp and a pair of antennas selected by Dean as appropriate.

11) Our conclusion from this exercise: The reason there have been no complaints about this system is that no one operates 17, 15, 12, or 10m in the test area (if any do in the Penn Yan area at all). In fact, Dean only found one obvious ham antenna in the town, a dual-band 2m/440 vertical (we didn't do an exhaustive search, but there were no obvious Amateur towers anywhere in town). Think about it- right now, we're in a solar cycle minimum. Those who might be inclined to operate on 10m probably don't right now, and there is never THAT much activity on the 17 and 12m bands anyway. By the way- the 11m band- CB- was WIPED OUT by the noise. Coincidentally, this weekend was the WPX contest and it so happened that 15 and 10m were open when we were in Penn Yan- signals were difficult to impossible to copy



DaveHallidyK2DHReportfromPenYann

through the noise, except for those well above S9. KB2ITN, Dave Simmons, the individual quoted in the Wall Street Journal article as being "satisfied that there is no interference" is a General Class licensee. As a General, he CAN operate 17, 15, 12, and 10m, but may choose not to and therefore may have missed what's there. He owns an electronics shop in downtown Penn Yan called Simtronics.

There you have it. I've tried to be as factual in this report as possible. Hopefully, there are no glaring technical errors. I welcome questions and constructive comments.

Regards, Dave Hallidy K2DH"

A couple of things- first, you can hear the audio of this interference by going to <http://www.rvhfg.com> (the Rochester VHF Group website). There is a link on the front page to take you to the downloads section and you can select the "Penn Yan BPL" download. It's a big MP3 file- about 16MB, so be patient. Also, be aware that my tape recorder was old and tired- the wobble you hear in the signal IS NOT the BPL, it's my tired tape machine- I gotta get a new one! I've also attached a photo of one of the poletops to this email (hope that's not against the policies of this list- if so, I apologize).

Also note: After the event, I lodged a formal interference complaint to the FCC, and I sent an email to Amperion, advising them of my observations and subsequent actions. Amperion has not responded, the FCC has indicated they will have a formal response within 20 days.

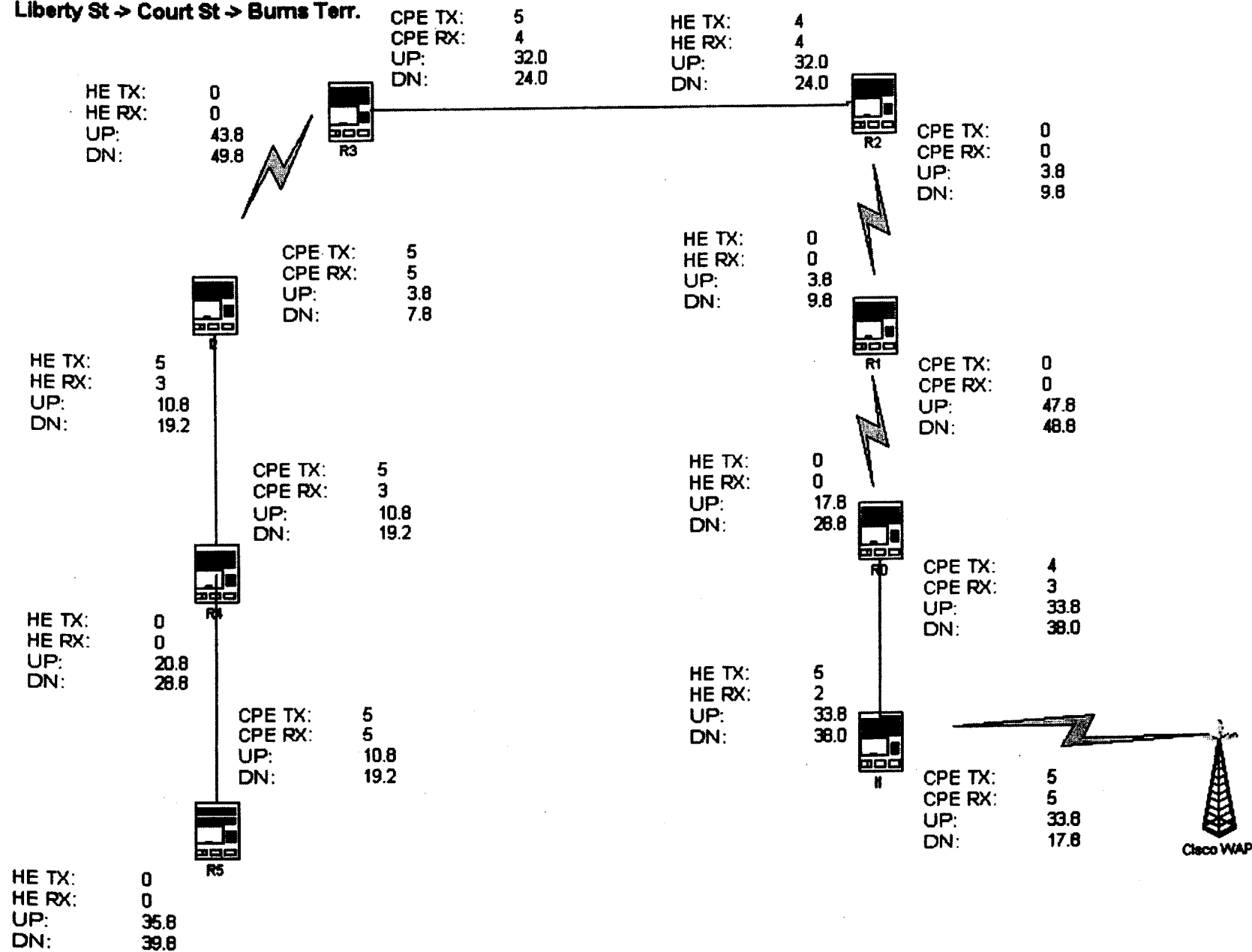
I hope this information is helpful- if you have any questions about what I did, please feel free to ask me!

Dave Hallidy K2DH

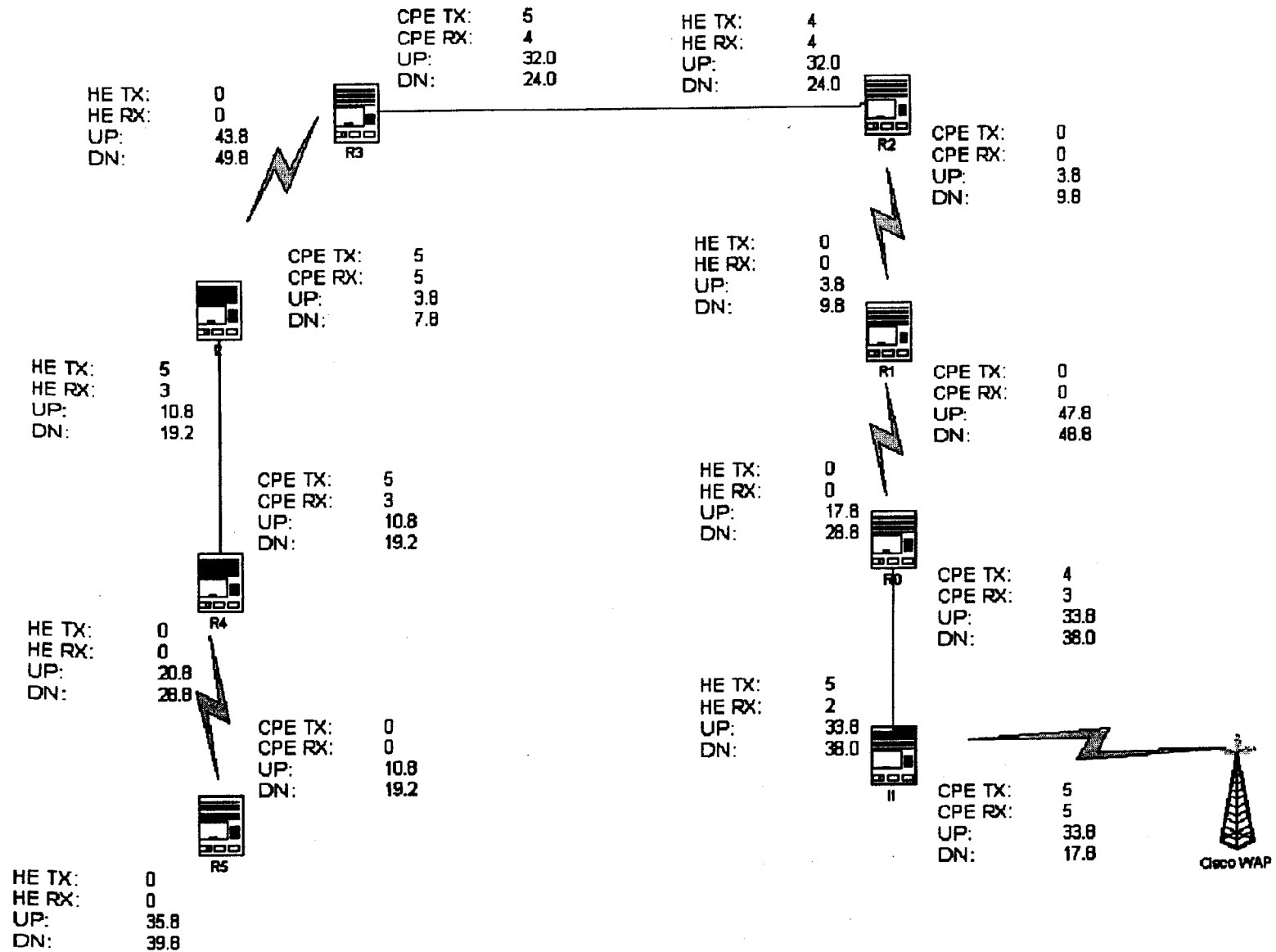
Yahoo! Groups Links

To visit your group on the web, go to:  
<http://groups.yahoo.com/group/BPLandHamRadio/>

**Frequency Map for Leg 1: [4.20.04]**  
**Liberty St → Court St → Burns Terr.**



**Penn Yan Frequency Map [4.26.04]**  
 Liberty st → Court St. → Burns Terrace



--- In BPLandHamRadio@yahooogroups.com, "Gary" <n0jcg@a...> wrote:  
Dave;

Great report! This is an excellent illustration of the power a prepared ham, or group of hams, have on the local level. The BPL proponents have 'promised' themselves into a corner where they can't deliver. It will be up to the local hams, who are better educated and more experienced at HF communications, to point this out thereby completely blowing the credibility of the BPL proponents with their customer, the utility.

Again, Bravo!

--- In BPLandHamRadio@yahooogroups.com, "Dave Hallidy" <k2dh@f...> wrote:

snip;

> When my wife and I got to Penn Yan, we had the receiver on in the truck, and

> could, as we expected, detect the BPL interference just as it had been on my

> previous visit- over S9 on 24.9MHz as I drove to the meeting location (a

> church near the trial area).

>

> It should be noted here that Simmons and Loew arrived at the meeting at

> least 20 minutes late, together, and came in during Ayers presentation.

>

Several people

> asked them questions, including me- I asked Loew why there was no

> experimental license for the Penn Yan trial, and he said he had been

> concerned about that, but that it was an Amperion question- I agreed. I

> also asked if the Amperion boxes had Part 15 compliance stickers on them,

> and if so, where they were located. Loew and Simmons replied that they

> thought so, but weren't sure where they would be, probably on the inside. I

> reminded them that FCC states that the stickers must be in a "conspicuous

> location" and that inside the box wasn't such a location. Loew stated that

> the people should not be concerned, they (DVI) were committed to an

> interference-free system in Penn Yan. He was then asked what people could  
> do if they felt they needed to complain to DVI about interference so that it  
> could get taken care of. His reply was, "You can call the Operations  
> Center." When asked for the phone number, he replied, "I don't have it-  
> call me instead." and GAVE US HIS CELL PHONE NUMBER! I asked him how the  
> company expected to make any money supplying this service to the rural  
> customers (there were a number of people from well outside the city  
> present), and his reply was "WE NEVER STATED THAT WE WOULD BE SUPPLYING BPL  
> TO THE FARMERS SPREAD MILES APART- WE'RE DEPLOYING THE SERVICE IN SMALL  
> CITIES AND TOWNS." I then reminded him of FCC Chairman Powell's statement  
> when the NPRM was released "I am optimistic and welcome the day when every  
> electrical outlet will have the potential to offer high-speed broadband and  
> a plethora of high-tech applications to all Americans." His comment was  
> (this is beautiful!) "I read Chairman Powell's statements every day- he  
> never said that."  
>  
> Several members then started asking me questions (they had been to our  
> club's website and heard the recording there), and I did my best to answer  
> them. My main point in being there was to make sure that these people, if  
> they had experienced interference, would lodge complaints to the FCC, and to  
> make sure that they understood the importance of commenting on the NPRM. So  
> my thrust was there. But I did offer to let anyone who hadn't heard the  
> interference yet, come out to my truck after the meeting and I'd give them a  
> demo.  
>

> At this point, the topic had been pretty well covered, so the meeting  
> officially ended. I asked for their business cards, Simmons gave me his,  
> but Loew "Didn't have any." I gave them mine. Simmons and Loew got up to  
> leave, but Simmons was cornered by several members who wanted to ask more  
> questions. Loew quietly slipped out the door. Ayers and I answered a few  
> more questions, then it was time to go.  
>  
> We went outside and those that were left wanted to see my mobile setup and  
> hear the interference. Guess what? IT WAS GONE!!! THE SYSTEM HAD BEEN  
> SHUT DOWN, either in the time before Simmons and Loew got to the meeting  
> (maybe why they were late), or when Loew slipped out the door at the end.  
> Everything was gone, completely. Interestingly, this explains why I got an  
> email from a ham who went to Penn Yan last Saturday (4/17) and found  
> nothing, yet another person (this one from Harris Corp) was there on the  
> same day and heard everything just as I had reported it. I think this  
> action speaks even louder than the interference about just what is going on  
> here, and does not present the BPL providers in a positive light at all.  
>  
> I was able to convince several people to lodge formal complaints to the FCC  
> about the interference they had experienced, and I believe they will.  
>  
> I'm sure there's more to come from this.  
>  
> Dave Hallidy K2DH  
--- End forwarded message ---

## James Burtie

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**From:** Dave Hallidy [k2dh@frontiernet.net]  
**Sent:** Wednesday, October 06, 2004 11:00 PM  
**To:** Anh Wride; Alan Stillwell; Riley Hollingsworth; James Burtie; Sheryl Wilkerson  
**Cc:** Ed W1RFI Hare; Dave Hallidy  
**Subject:** Effectiveness Of "Notching" BPL Signals In Amateur Radio/SWL Bands

Dear FCC Staff-

I have recently seen discussions related to the FCC's opinion that notching is an effective tool to mitigate BPL interference in the Amateur Radio HF bands. I've been closely involved with monitoring the system trial that was conducted (and recently terminated) in Penn Yan, NY. I'd like to share with you my experiences and observations that contradict this opinion.

DVI (the BPL provider in Penn Yan) and their equipment supplier, Amperion, used notching to attempt to reduce the level of BPL interference observed by me and others. In my initial complaint to the FCC in late March, 2004, I noted that strong BPL signals were observed continuously from below 18 MHz to above 30 MHz. DVI and Amperion reported that they had worked to improve the situation and on my second visit (in late May, 2004), I observed the following (I would also note here that the FCC never replied to any of my complaints in this matter) (the information below is excerpted and quoted from my second official complaint to the FCC):

"DVI (the provider) has made an attempt to reduce the interference to the Amateur spectrum in Penn Yan. They have been partially successful.

- 1) The 10m band (28.00-29.70 MHz) is clear of any BPL (it was completely covered with BPL during my first visit).
- 2) An attempt has been made to notch out BPL from the 15m band (21.00-21.45 MHz).
- 3) An attempt has been made to notch out BPL from the 12m band (24.890-24.990 MHz).
- 4) No attempt has been made to remove BPL from the 17m band. The 17m band (18.068-18.168 MHz) is completely covered up with strong BPL (as it was on my first visit).
- 5) The 15m band is only partially cleared of BPL. The lower 100kHz of the 15m band is completely covered up with strong BPL (the entire 15m band was covered up during my first visit), and residual carriers exist up to about 21.16 MHz.
- 6) The 12m band is only partially cleared of BPL. The lower 20kHz of the 12m band is completely covered up with strong BPL (the entire 12m band was covered during my first visit). In addition, the notch in the 12m band is rather ineffective- the residual signals never disappear."

As you can see, in their attempts to move and notch the BPL spectrum to mitigate interference, Amperion demonstrated only limited control of their hardware. I also have observed that energy from the Amperion BPL system is not well-contained within it's intended spectrum blocks. Residual signals spill over into neighboring spectrum. These signals ARE weaker than the main "intended" signal, but only attenuate gradually as one tunes away from the edge of the main signal.

In addition to interference in the Amateur bands, apparently no one at DVI or Amperion had given any thought to interference to the International Shortwave Broadcast Bands. The system in Penn Yan showed no attempt to notch or reduce interference there in any way, and moderately strong signals in the SWBC bands were obliterated by BPL.

My belief is that at some point in time, the technology employed by the manufacturers of BPL equipment will be both advanced enough and agile enough to effectively mitigate interference by the use of notching techniques. Today, at least in the experience I've had in Penn Yan, I must conclude that the equipment presently available does not have the capability to do this.

Sincerely,

David Hallidy K2DH  
663 Beadle Road  
Brockport, NY 14420  
585-637-0696

k2dh@frontiernet.net



**James Burtie**

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**From:** James Burtie  
**Sent:** Thursday, March 11, 2004 12:08 PM  
**To:** 'ed.wallace@pgnmail.com'; 'matt.oja@pgnmail.com'  
**Subject:** Interference complaints



Mr. Wallace and Mr. Oja,

This is the interference complaint that I told you about. I have included two others that we have received. Please contact the complainants and resolve the interference. Once the interference has been resolved, please send the complainants an e-mail asking him to respond indicating that the interference problem has been solved. Once you have received that e-mail, please forward it to me.

Thank you,

Jim Burtie

Chief, Experimental Licensing Branch

Federal Communications Commission

Dear Mr. Godwin and Mr. Poole,

I am a ham radio operator in Raleigh, NC (N4XD) and recently was able to experience first hand the radio interference generated by BPL. I, along with several others, visited the system under trial in Fuquay-Varina that Progress Energy is running. It is in the Woodchase Subdivision.

When we visited the subdivision we tuned an Icom 706Mk2 radio to the 10 meter ham band (28Mhz through 29Mhz). Across the whole spectrum we encountered strong interference. On the S meter of the radio we saw readings from S5 to S7. This was with a simple vertical antenna. With a gain antenna which is what many of us use, the readings would have been much higher. A level of interference this high seriously impedes communications on the frequencies being affected.

To my surprise the interference was not on discrete frequencies but rather spanned the entire band from 28 to 29Mhz. Interference, to a lesser degree, was also heard on the 24Mhz ham band.

This interference seemed to be generated from just one location which, if I understand correctly, was the injection point for the trial deployment. The signals from this could be heard as we drove through the sub division. I can only imagine what will happen when many of these points are in action. Communication as we now know it will be gone.

I would also like to comment on a subject that was commented on in the recent FCC writings. It has to do with line noise. The comment from the FCC was that since we (hams) are dealing with it now the FCC feels that we just point our antennas away from the line noise. This just isn't the case. Perhaps some hams that only wish to communicate in one direction can and do do that but I for one have moveable directional antennas to maximize my receiving capability in a variety of directions based on where the station is that I wish to work. I do not leave the antennas in one direction.

I strongly feel that the line noise issues we seem to face every year is a fine example of how we battle noise that is covered by part 15. While the power companies are typically responsive it is difficult, perhaps impossible, to eliminate the interference caused by line noise. If we can't eliminate an existing well known source of interference then how can the FCC expect the interference caused by BPL to be any different? I find it offensive that the FCC turn this existing problem into justification for BPL!

I am sure that the majority of hams would love to see every household be able to access the internet via a broad band connection. We are not against that. In fact I have a second home that would greatly benefit from this kind of service. We just want to see a system that can do it without the well documented interference generated by BPL.

Thank you for your time and consideration.

Ron Spencer  
N4XD

Dear Mr. Godwin and Mr. Poole,

I am writing to report my personal observation of radio interference generated by the Progress Energy BPL system that is currently operational in the Fuquay Varina, NC area, more particularly, the Woodchase subdivision.

I am a amateur radio operator(NX9T) and have a mobile transceiver installed in my vehicle. I operate mobile on many of the assigned amateur frequencies and when entering the area described above on Saturday February 28th, 2004, at approximately 9:30am, encountered significant radio interference in the 10meter and 12 meter ham bands(24mhz and 28/29 mhz).

The interference generated by the BPL unit located on a power pole just in front of the subdivision was radiating a signal so strong that it would severely limit communication capabilities on the frequencies listed above. The signal/interference was so strong that it was registering a S7 to S9 reading on the Icom 706 amateur transceiver. For informational purposes, typical signals are usually in the S5-S7 range which would be completely covered up by the BPL interference. The interference was detected between .5 and 1 miles from the pole identified.

I hope this information is helpful as you assess the realities of BPL and the issues at hand. Please earnestly look into this particular interference complaint but even more importantly, seriously evaluate the BPL generated interference issue in a more global manner.

Thank you for your time.

Jeff Keller  
Amateur radio operator NX9T  
4500 Clear Cut Court  
Wake Forest, NC 27587  
919-861-8696

Gentlemen,

I would like to log a complaint regarding radio frequency interference at my home in Fuquay-Varina, NC. I operate a amateur radio station call sign N1UJ at my home 509 Wyndham Drive (Sandy Springs Subdivision). Over the last few weeks I have been experiencing interference across the amateur 10 meter band (28.000.00Mhz to 29.700.00Mhz) and the amateur 12 meter band (24.890.00Mhz to 24.990.00Mhz). I have identified the interference radiating from the Woodchase subdivision off of James Slaughter Road located 0.64 miles from my home. I understand the Woodchase subdivision is one of Progress Energy's BPL test sites. Please contact me to discuss your coarse of action to resolve this interference.

Theodore J. Root, N1UJ Amateur Radio Operator  
509 Wyndham Drive  
Fuquay-Varina, NC 27526  
919-557-4372  
n1uj@nc.rr.com

James Burtie

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From: Dick Orander [kd4isc@worldnet.att.net]  
Sent: Thursday, March 11, 2004 4:55 PM  
To: bill.godwin@pgnmail.com; stephen.poole@pgnmail.com  
Cc: Anh Wride; Riley Hollingsworth; David Solomon; James Burtie; w1rfi@arrl.org; w4fal@smithchart.org  
Subject: BPL Interference Complaint  
Dear Sirs:

I would like to log a complaint regarding radio frequency interference in an area that I travel through in Fuquay Varina, NC. I operate a mobile amateur radio station (call sign KD4ISC). Recently, I have been experiencing interference in the 28.-29 MHz frequency range. I have detected this interference in an area within a half mile of the intersection of James Slaughter Road and Road Street (Hwy 55) near Fuquay Varina. I understand this area is one of the Progress Energy BPL test sites. Please contact me to discuss your course of action and an expected date of resolution of this interference.

Thank you,

Dick Orander KD4ISC  
1004 Wilshire Drive  
Fayetteville, NC 27511  
[kd4isc@arrl.net](mailto:kd4isc@arrl.net)

3/26/2004

## Alan Stillwell

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**From:** James Burtle  
**Sent:** Friday, March 12, 2004 12:58 PM  
**To:** Alan Stillwell; Bruce Franca  
**Subject:** FW: Progress Energy BPL

-----Original Message-----

**From:** James Burtle  
**Sent:** Friday, March 12, 2004 8:46 AM  
**To:** 'ed.wallace@pgnmail.com'; 'matt.oja@pgnmail.com'  
**Subject:** FW: Progress Energy BPL Complaints

Mr. Wallace and Mr Oja,

And another one.

Jim Burtle

-----Original Message-----

**From:** Frank A. Lynch [mailto:flynch@nc.rr.com]  
**Sent:** Friday, March 12, 2004 5:39 AM  
**To:** Bill Godwin; Poole, Steve  
**Cc:** Gary Pearce; Tom Brown; Ed Hare; David Sumner; Chris Imlay; Anh Wride; David Solomon; James Burtle; Norman Young; Danny Hampton; John Covington, W4CC  
**Subject:** Progress Energy BPL Complaints

Let's review what I have on Progress Energy BPL complaints thus far:

Ted Root N1UJ  
Ron Spencer N4XD  
Jeff Keller NX9T  
Bob Condor K4RLC  
Frank Lynch W4FAL

These complaints were made between March 3 and March 10. I am working with several of the hams that are on the attached map to also file written complaints (some are reluctant to file a complaint since they know complaints have already been filed ... It's the old.. they know it's

3/12/2004